

## **APPLICATION FOR A COASTAL ZONE ACT STATUS DECISION**

**State of Delaware  
Department of Natural Resources & Environmental Control  
Office of the Secretary**

March 26, 2014  
Green Recovery Technologies, LLC  
Joe Caulfield and Patrick Heringslack



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## **CZA Status Decision Application Instructions**

1. Complete all parts of the application. For questions which are not applicable to your project, do not leave blank; present a statement that clearly states why the section is not applicable to your project.
2. Because all applicants' projects are different, this word document template will provide you flexibility for needed space to answer the questions. Please insert additional lines for text where needed for your application. If appropriate, attach extra pages referencing each answer by the corresponding question number.
3. Submit eight complete hard copies of the application to:

State of Delaware  
Department of Natural Resources & Environmental Control  
Office of the Secretary  
89 Kings Highway  
Dover, DE 19901

In addition to the eight hard copies, submit a complete electronic "pdf" copy of the permit application on cd-rom.

4. Comply, if required, or as requested by the DNREC Secretary, with 7 Delaware Code, Chapter 79, Section 7902. If requested, but not completed, your application will not be considered administratively complete until this form is reviewed.
5. Be sure to include your permit application fee of \$3,000; otherwise the application will not be considered administratively complete. Make checks payable to the "State of Delaware."
6. Be advised that the application for a Delaware Coastal Zone Act Status Decision is a public document, which may be displayed at DNREC offices, public libraries, and the web, among others. If this application requires you to place confidential information or data in the application to make it administratively complete, note the Delaware Freedom of Information Act (29 Delaware Code, Chapter 100) and DNREC's Freedom of Information Act Regulation, Section 6 (Requests for Confidentiality), for the proper procedure in requesting confidentiality.

*Note: This application template was last revised by DNREC on August 31, 2007. Please discard any previous versions.*



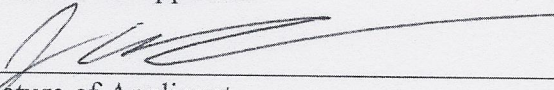
**PART 1**

**CERTIFICATION BY APPLICANT**

Under the penalty of perjury pursuant to 11 Delaware Code §1221-1235, I hereby certify that all the information contained in this Delaware Coastal Zone Act Status Decision Application and in any attachments is true and complete to the best of my belief.

I hereby acknowledge that all information in this application will be public information subject to the Delaware Freedom of Information Act, except for clearly identified proprietary information agreed to by the Secretary of the Department of Natural Resources & Environmental Control.

Joseph Caulfield  
Print Name of Applicant

  
Signature of Applicant

Chief Technology Officer  
Title

March 14, 2014  
Date



## PART 2

### APPLICANT INFORMATION AND SITE IDENTIFICATION

2.1 Identification of the applicant:

Company Name: Green Recovery Technologies, LLC  
Address: 42 Lukens Drive, Suite 100, New Castle, DE 19720  
Telephone: (302) 691-7458  
Fax: (610) 444-9754

2.2 Primary contact: Please list the name, phone number and email of a preferred contact within your company in case the DNREC needs to contact you regarding this status decision.

Joe Caulfield  
Chief Technology Officer  
(302) 691-7468  
[jcaulfield@greenrecoverytech.com](mailto:jcaulfield@greenrecoverytech.com)

2.3 Site of proposed project (if different than above):

2.4 Authorized agent (if any):

Name: Patrick Heringslack  
Address: 137 West State Street, Kennett Square, PA 19348  
Telephone: (610) 444-9752  
Fax: (610) 444-9754

*If you have an authorized agent for this status decision process, provide written authorization from client for being the authorized agent.*

2.5 Is the applicant claiming confidentiality in any section of their application?

YES

☒ NO

If yes, see instructions on page 3.



## PART 3

### PROJECT SUMMARY

*Provide a one-page summary describing the proposed project or use. Include a brief quantitative description of any anticipated environmental impacts.*

#### GRT's Process

##### **Inputs:**

4,200 lbs. of a rendered, comingled stream of protein and lipids from the poultry processing industry. This consists of 69% lipids, 29% protein and 2% moisture in a solid-based format. This is delivered to the site in a super sack format on a box trucks. Rough estimate of truck traffic is 2 trucks/day.

##### **Process:**

A small quantity of liquefied flammable gas is used as a solvent to separate the protein fraction from the lipid fraction. This is done in a nitrogen-blanketed environment to prevent process upsets. The solvent is run in a closed, full cycle system with a full solvent recovery process embedded.

##### **Outputs:**

A *high purity protein stream* (free of oil) is produced and bagged in super sacks under a negative air filtration system. This is shipped out in box trucks at less than 1 truck per day.

A *high purity lipid stream* (free of proteins) is produced and output directly to a tanker truck in a closed, piped environment. This is shipped out at 2 tanker trucks per day.

*Water* is also produced as waste stream. This is from the incoming moisture from the input stream and the condensate from process steam consumed during the operation. This is piped to the city sewer and is monitored using a detector station at the outfall.

*Boiler air emissions* from the 7.2MM BTU boiler are output. This is under the permit-required threshold 15MM BTU.

*Nitrogen* from the process is discharged to the air at a rate of 60 SCFH (std. cubic feet/hour).

#### Environmental Impacts

*Water* - Limited to no environmental impacts are expected from the GRT process. The output of water will be potable from city sewer standards, as it will be steam condensate or distilled during the process.

*Air* - Limited to no environmental impacts are expected from the GRT process. Greenhouse gas related emissions are limited to small sulfur oxide and nitrogen oxide gasses from standard boiler emissions, well below permit threshold. Nitrogen emissions are typical for small industry and are a component of the protection of employees and other stakeholders to provide inert atmosphere for flammable gas.

*Solid Waste* - No environmental impact beyond office waste and packaging waste, which will be sent to landfill.



## PART 4

### PROJECT INFORMATION

- 4.1 Is the proposed project entirely or partly a new, or improved, or extended pier or other ship docking facility?

YES

☒ NO

If yes, will it be used at least in part for bulk cargo transfers by the applicant?

YES

NO

N/A

If no, please explain what it will handle:

- 4.2 Is this project entirely for pollution control purposes?

YES

☒ NO

- 4.3 Is this project a new research and development facility?

YES

☒ NO

- 4.4 Is this project a new or expanding (flow rate) public sewage wastewater treatment plant?

YES

☒ NO

- 4.5 Will the proposed project meet the following definition of "Manufacturing" as found in the Coastal Zone Act: "Manufacturing means the mechanical or chemical transformation of organic or inorganic substances into new products, characteristically using power driven machines and materials handling equipment, and including establishments engaged in assembling component parts of manufactured products, provided the new product is not a structure or other fixed improvement."

☒ YES

NO

If no, explain what kind of activity will be carried out at this project site:



4.6 Will the project have the following equipment or facilities?

- |                                     |     |                                     |
|-------------------------------------|-----|-------------------------------------|
| a. Smoke stacks                     | YES | <input checked="" type="radio"/> NO |
| b. Tanks                            | YES | NO                                  |
| c. Distillation or reaction columns | YES | NO                                  |
| d. Chemical processing equipment    | YES | NO                                  |
| e. Scrubbing towers                 | YES | NO                                  |
| f. Pickling equipment               | YES | NO                                  |
| g. Waste treatment lagoons          | YES | NO                                  |
| h. Smelters                         | YES | NO                                  |
| i. Incinerators                     | YES | NO                                  |

4.7 Will the project use 20 acres or more?

YES

☒ NO

How many acres will it use? 0.5 acres

4.8 Does this facility appear in Appendix B of the Coastal Zone Act Regulations (the list of the nonconforming uses)?

YES

☒ NO

If no, proceed to question 4.11

4.9 Will the proposed activity described in this application occur entirely within the lines delineating the area of nonconformity for this site, as seen in the Appendices of the Regulations?

YES

NO

☒ N/A

4.10 Will the proposed activity or use straddle this line?

YES

NO

☒ N/A

If yes, describe what equipment, facilities, or machinery will be within the delineated area of nonconformity AND what will be outside of this area of nonconformity:



- 4.11 Is the proposed project or use part of a manufacturing use that was in operation prior to and on June 28, 1971?

YES

NO

- 4.12 Has this facility ever been granted a Coastal Zone Act Permit?

YES

NO

If yes, please provide the following information:

Applicant Name	Permit Number	Date Issued

- 4.13 Does the new or expanded use involve any change in existing:

a. processes?

YES

NO

b. facilities?

YES

NO

c. buildings?

YES

NO

d. emissions discharge?

YES

NO

If yes, please explain each in detail.

This is a new operation for this building. The site will be updated with the process equipment, office space, quality lab and other controls to operate the facility safely. All processes described previously will need to be added to this building.

Use the following tables to help describe any new or changed air or water emissions:

#### Air Emissions

Pollutant	Existing Emissions		Net Increase/Decrease		New Total Emissions		Percent Change (compare tons/year)
	Lbs/day	Tons/year	Lbs/day	Tons/year	Lbs/day	Tons/year	
Nitrogen	112	18.9	112	18.9	112	18.9	100%



**Water emissions – no wastewater in process**

Pollutant	Current Discharge Concentration (ppm)	New or Changed Discharge Concentration (ppm)	Current Discharge		Net Increase/Decrease		New Total Emissions	
			Lbs/day	Tons/year	Lbs/day	Tons/year	Lbs/day	Tons/year

- 4.14 Will this project directly or indirectly increase plant production over present capacity?

YES  
☒ NO

If yes, explain in what way and by how much:

- 4.15 Will this project result in the production of any new products, either directly or indirectly, at this facility?

☒ YES  
☐ NO

If yes, list each new product:

The project will result in a high purity protein stream and a high purity lipid stream.

- 4.16 List materials and/or ingredients to be utilized by this proposed project and how they will be transported to the site.

4,200 lbs. of rendered, comingled stream of protein and lipids from the poultry processing industry is delivered via super sacks. A solvent is used to separate the protein fraction and lipid fraction. Outputs include a high purity protein steam and a high purity lipid steam. Outputs will be shipped out via box truck and tanker trucks.



## PART 5

### PROJECT SITE AND ZONING

- 5.1 In a separate attachment, provide a map of appropriate scale to clearly show the site. Mark important natural features and project buildings and processing equipment of the proposed project such as roads, wetlands, railway sidings, drainage ways, tanks, sewer systems, water mains, wells, etc.  
See attached.

- 5.2 What is the current SIC code for the proposed use?

2048

- 5.3 What is the current zoning and planned land use of the proposed project site?  
See attached.

- 5.4 Will the proposed project require a zoning change?

YES

☒ NO

If yes:

A. To what classification will it be changed?

B. What zoning authority is responsible for reviewing and approving the change?

- 5.5 Will this project require new supporting facilities?

YES

☒ NO

If yes, describe each facility, and how it will be used:



## PART 6

### PROJECT DESCRIPTION AND PROJECT IMPACTS

- 6.1 On a separate attachment labeled “**Project Description**,” provide a concise but complete description of the proposed project or use. Be sure to answer the following questions:
- How does the project relate to any existing manufacturing operations and facilities (if this is not for an entirely new manufacturing plant)?
  - What effects will there be, if any, on land use acreage, manufacturing production capacity, modification of current product line(s), and safety risks to the public and to company employees?
  - Is this project or use a complete, single project, or is it part of a long-term, large-scale project that has other components to it that may need approval under the Coastal Zone Act at a later date?
  - If it is part of a larger project, describe the entire project in detail and mention ALL major machinery, facilities, land, products, and processes involved.
- 6.2 On a separate attachment labeled “**Environmental Impacts**,” provide a detailed and accurate impact analysis that describes the proposed project’s impacts on:
- air quality
  - local surface and ground water quality
  - surface and groundwater withdrawals
  - habitat loss
  - solid and hazardous waste generation
  - noise
  - odors
  - local aesthetic quality
  - any other notable factors not listed above
  - Provide a detailed statement describing the proposed project’s potential to pollute should equipment malfunction or human error occur, including a description of backup controls, backup power, and safety provisions.
- 6.3 On a separate attachment labeled “**Other Project Impacts**,” provide a detailed and accurate analysis on how the proposed project will impact each of the following (include both positive and negative impacts):
- the economy (corporate, state, county)
  - county and municipal comprehensive plans/ zoning
  - effect upon neighboring land uses
  - the impacts, if any, that *supporting facilities* will have on: the environment; economics of the area; zoning; neighboring land uses; and aesthetic quality.



## **Project Description**

(Refer to Question 6.1)

- a. The project involves a new manufacturing plant. The existing structure has been gutted and refurbished with the process equipment and office space.
- b. There will be no impact on land use acreage and since this is a new process the existing process lines and manufacturing production capacity are not applicable. Safety risks to the public and company employees are low to none. The system is a closed system with alarms should any release or leaks occur. Ongoing maintenance and monitoring will occur throughout the year. Internal safety controls will be in place to protect employees from releases inside the building. A risk assessment will be conducted to identify any health and safety risks for employees with controls identified. Industry best practices, state and federal regulatory requirements will be met in terms of risk assessments, hazard communication, training, personal protective equipment (PPE) and emergency response.
- c. This project is a complete, single project and will not need approval under the Coastal Zone Act at a later date.
- d. Not applicable.



## Environmental Impacts

(Refer to Question 6.2)

- a. Air Quality – the process involves a closed system and alarms with limited to no release to the air quality. The boiler is well under the limits of an impact on ambient air quality. The only potential regular release is Nitrogen but the amounts will be extremely low.
- b. Local surface and groundwater quality – there will be no impact on local surface and groundwater quality. All wastewater from the site will be potable water and treated via the POTW. In the unlikely chance of a release the water will be void of contaminants.
- c. Surface and groundwater withdrawals – not applicable. The process will not withdrawal water from local surface or groundwater sources.
- d. Habitat loss – not applicable. GRT is not making any changes to the already existing building and/or industrial park.
- e. Solid and hazardous waste generation. GRT will not create any hazardous waste. The only solid waste that site will create is related to packaging materials. As appropriate GRT will recycle what it can and send other solid waste to the municipal dump.
- f. Noise. There will be no increase in noise from the process.
- g. Odors. There will be no change in odor.
- h. Local aesthetic quality. GRT will be adding a 70' column in the rear of the building. Due to the setting of the building and the layout of the industrial complex it is not expected for this column to have an impact on the local aesthetic quality.
- i. None
- j. The process has the appropriate checks and balances to avoid any releases. Should a release occur, there are internal HVAC controls to promptly remove any potentially hazardous emissions from the work area. The solvent use will evaporate after exposure to the air and cannot cause any harmful impact on the community or employees.



## **Other Project Impacts**

(Refer to Question 6.3)

- a. The project will positively impact the community by creating 30 new jobs in New Castle country and by removing a potential harmful material from the environment and turning it into an animal food product. There will be an increase in truck traffic to the site (4 trucks/day) but the impacts are nominal.
- b. There will be no impact on county and municipal comprehensive plans/zoning.
- c. There will be no effect upon neighboring land uses.
- d. There will be no support facilities.



***END OF APPLICATION***

***ATTACHEMENTS TO FOLLOW***